Pisolithus aureosericus
**Pisolithus aureosericeus** M.P. Martín, Kaewgrajang, Phosri & Watling, *sp. nov.*

**Etymology.** From Latin aureus and sericeus, referring to the colour and texture of the peridium.

**Classification.** Sclerodermataceae, Boletales, Agaricomycetes.

Macroscopic characteristics — Basidiomes subglobose to broadly ellipsoid, gasterocarp, 10–50 mm, sessile. **Peridium** surface slightly velvety, golden yellow at first, later buff to snuff brown. **Rhizomorphs** at the base, small, 0.8–1.3 mm high × 0.3–0.5 diam. **Gleba** orange-brown become ferruginous powdery mass at maturity by the breakdown of the peridioles. **Peridioles** subglobose to broadly ellipsoid, 0.2–0.8 × 1.0–1.2 mm diam, thin-walled, surface smooth, bright yellow or greenish yellow, later a snuff-brown powdery mass when they mature.

Microscopic characteristics — **Constituents** yellow, later a snuff-brown powdery mass when they mature. **Spora** globose to subglobose, 8.5–10 × 8–11 µm excluding ornamentation, pale brown, densely ornamented with pyramidal spines (0.5–0.8 µm long).

**Typos.** Thailand, Nakhon Ratchasima, alt. 470 m, N14°29'59"E101°56'22", on clay loam soil, under Hopea odorata trees, 8 Aug. 2012, T. Kaewgrajang KUFF001 (holotype Herbarium Kasetsart University, ITS sequence GenBank KU351837, MycoBank MB851695).

Additional materials examined. Thailand, Nakhon Ratchasima, alt. 470 m, N14°29'59"E101°56'22", on clay loam soil, under Hopea odorata trees, 8 Aug. 2012, T. Kaewgrajang KUFF002 (Herbarium Kasetsart University, ITS sequences GenBank KU351835, KU351836); ibid., T. Kaewgrajang KUFF003 (Herbarium Kasetsart University, ITS sequences GenBank KU351838, KU351839, KU351840).

Notes — The genus *Pisolithus* has for a long time been considered a genus of species with mainly a xerophytic lifestyle, being found in shrub-land, woodland-clearings, even wasteland, and all generally on highly mineral soils (Pilát 1958). For many years the dark coloured, elongated, narrow stemmed *Pisolithus kisingii* was perhaps the only species linked to *Pisolithus kisslingii* (2013) clearly grouped the new sequences with species of *P. aurantioscabrosus* from Malaysia collected under Shorea macropera. However, the specimens of *P. aureosericeus* form a cluster together as a group of their own, and were collected under Hopea odorata. Moreover, the peridium surface is slightly velvety and golden yellow, and the basidiospores are strongly ornamented with wedge-shaped extensions giving a very rough appearance; although *Pisolithus* spores are ornamented this present feature is rather uncommon in the genus and helps to delimit this new taxa under the microscope.

One of the 100 equally most parsimony trees obtained after a heuristic search of the ITS sequence alignment (PAUP v. 4.0b10). Following Phosri et al. (2012) and Martín et al. (2013), sequences of *Suillus luteus* and *Scleroderma citrinum* were included as outgroup. *Pisolithus* sequences were distributed in 15 main clades, clade number after Martín et al. (2002); percentage of bootstrap values (> 50 %) are indicated on the branches. The *P. aureosericeus* clade is marked with a grey square (H: Holotype; P: Paratypes); the accession number from EMBL/GenBank or UNITE databases are indicated to the rest of terminals.

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**Colour illustrations.** Thailand, Nakhon Ratchasima (T. Kaewgrajang): a. basidiome (KUFF001); b. basidiomes (KUFF001) detail to shown the peridioles; c. d. spores (KUFF001). Scale bars = 10 mm (basidiomes), 1 µm (spores).